

Claim Listing

1. – 13. (Cancelled).

14. (Previously presented) A method of operating a resistive touch sensitive screen for increased security and lower power consumption, the resistive touch screen comprising a first conductive layer and a second conductive layer, the first conductive layer having a first electrode and a second electrode, the second conductive layer having a first electrode and a second electrode, the method comprising the steps of:

- applying substantially equal voltages to the first and second electrodes of the first conductive layer;
- applying substantially equal voltages to the first and second electrodes of the second conductive layer such that approximately zero current is conducted in the first and second conductive layers under quiescent conditions;
- measuring currents from the first and second electrodes of the first conductive layer;
- measuring currents from the first and second electrodes of the second conductive layer;
- adding the currents from the first and second electrodes of the first and second conductive layers together; and
- sending an alert signal when the currents from the first and second electrodes of the first and second conductive layers added together do not equal approximately zero.

15. (Original) The method of operating a resistive touch sensitive screen as recited in claim 14 further including the steps of:

- touching the resistive touch sensitive screen such that the first conductive layer couples to the second conductive layer; and
- determining a location where the resistive touch sensitive screen is touched using currents from the first and second electrodes of the first conductive layer and currents from the first and second electrodes of the second conductive layer.

16. (Original) The method of operating a resistive touch sensitive screen as recited in claim 15 further including a step of determining a pressure applied to the resistive touch sensitive screen using currents from the first and second electrodes of the first conductive layer and currents from the first and second electrodes of the second conductive layer.

17.-22 (Cancelled).

23. (Currently amended) ~~The apparatus of claim 19;~~ An apparatus comprising:  
a resistive touch screen;  
a substrate;  
a plurality of current to voltage converters on said substrate responsive to said resistive touch screen; and  
a plurality of wires coupling said resistive touch screen to said plurality of current to voltage converters, wherein a voltage on each of said plurality of wires remains substantially constant during operation of said resistive touch screen;  
~~The apparatus of claim 18 further including an A/D converter on said substrate responsive to said plurality of current to voltage converters;~~  
a microcontroller on said substrate responsive to said A/D converter;  
wherein the resistive touch screen comprises a first conductive layer and a second conductive layer, the first conductive layer having a first electrode and a second electrode, the second conductive layer having a first electrode and a second electrode;~~;~~ and  
~~wherein the apparatus further comprises~~  
a detection circuit configured to measure currents from the first and second electrodes of the first conductive layer and currents from the first and second electrodes of the second conductive layer, and to add the currents from the first and second electrodes of the first and second conductive layers together; and  
an alarm coupled to the detection circuit and configured to send an alert signal when the currents from the first and second electrodes of the first and second conductive layers added together do not equal approximately zero.

24. (Currently amended) An apparatus responsive to a resistive touch screen, of the type having a first conductive layer and a second conductive layer separated from one another under a quiescent condition and coupled with each other during a touch condition, said first and second conductive layers each having a first and a second electrode, the apparatus comprising: a detection circuit coupled to said resistive touch screen, said detection circuit configured to provide a first reference voltage to said first and second electrodes of said first conductive layer and to provide a second reference voltage to said first and second electrodes of said second conductive layer, wherein said detection circuit maintains said first and second reference voltages substantially constant during said touch condition; ~~The apparatus of claim 1,~~

wherein the detection circuit is configured to measure currents from the first and second electrodes of the first conductive layer and currents from the first and second electrodes of the second conductive layer, and to add the currents from the first and second electrodes of the first and second conductive layers together, and wherein the apparatus further comprises an alarm coupled to the detection circuit and configured to send an alert signal when the currents from the first and second electrodes of the first and second conductive layers added together do not equal approximately zero.